Gulf of Mexico Harmful Algal Bloom Bulletin

Region: AL/MS/FL

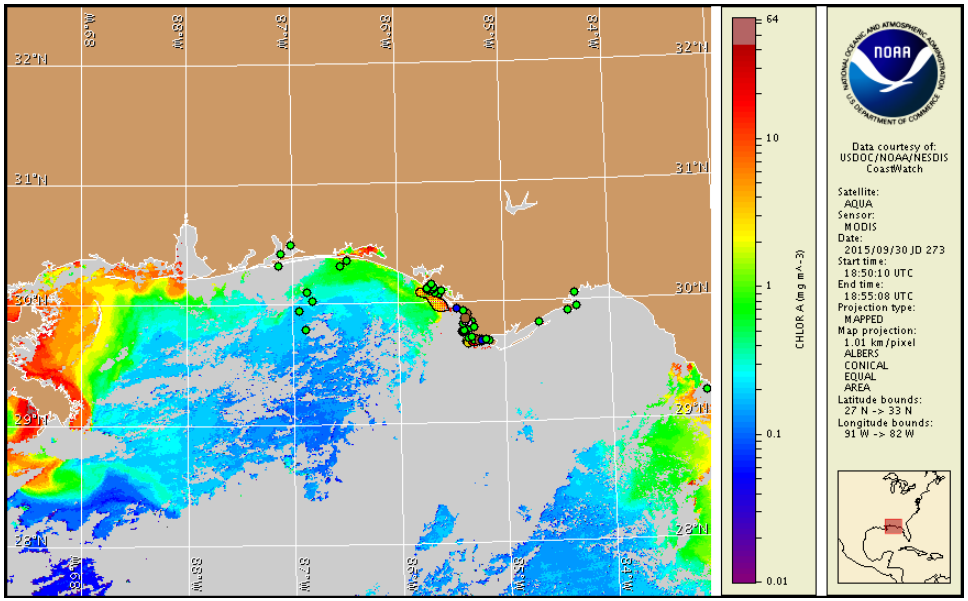
Thursday, 01 October 2015

NOAA National Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 28, 2015



Satellite chlorophyll image with possible *K. brevis* HAB areas shown by red polygon(s), when applicable. Points represent cell concentration sampling data from September 21 to 30: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide: http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

Detailed sample information for Florida can be obtained through FWC Fish and Wildlife Research Institute at: http://myfwc.com/redtidestatus

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit at: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

Not present to high concentrations of *Karenia brevis* (commonly known as Florida red tide) are present along- and offshore portions of northwest Florida from Escambia to Taylor counties. *K. brevis* concentrations are patchy in nature and levels of respiratory irritation will vary locally based upon nearby bloom concentrations, ocean currents, and wind speed and direction. The highest level of potential respiratory irritation forecast for alongshore northwest Florida Thursday, October 1 to Monday, October 5 is listed below:

County Region: Forecast (Duration)
Bay County: Low (Th-M)
Gulf County: High (Th, Sa-M), Low (F)
Gulf County, west bay regions-St. Joseph Bay area: Low (Th-M)
Gulf County, east bay regions-Indian Lagoon area: Low (Th-M)
Franklin County: Low (Th-M)
All Other NWFL County Regions: None expected (Th-M)
SWFL County Regions: Visit http://tidesandcurrents.noaa.gov/hab/#swfl

Check http://tidesandcurrents.noaa.gov/hab/beach_conditions.html for recent, local observations. Health information, from the Florida Department of Health and other agencies, is available at http://tidesandcurrents.noaa.gov/hab/hab_health_info.html. Reports of respiratory irritation have been received from Bay and Gulf counties. Reports of dead fish have been received from Bay, Gulf, and Franklin counties.

Analysis

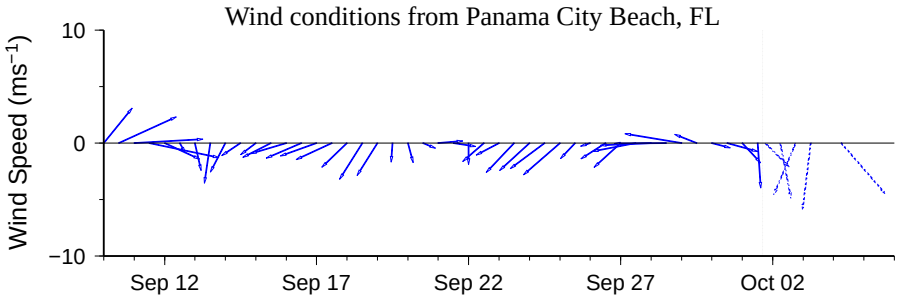
Recent samples collected last week from along- and offshore northwest Florida (Escambia to Taylor counties) indicated not present to 'high' concentrations of *Karenia brevis*. Alongshore Gulf County, sampling indicated 'high' *K. brevis* concentrations at Salinas Park and up to 'low b' *K. brevis* concentrations along the western shore of the St. Joseph Peninsula (FWRI; 9/23). Sampling throughout the St. Joseph Bay and Indian Lagoon regions of Gulf County identified not present to 'low a' *K. brevis* concentrations (FWRI; 9/24-9/29). No new sampling has been received from Bay County, where respiratory irritation and fish kills have been reported, since the last bulletin on 9/28. All other sampling along- and offshore Escambia and Okaloosa counties continue to indicate *K. brevis* is not present (FWRI; 9/24-9/29). Reports of respiratory irritation have been received from alongshore Bay and Gulf counties. Reports of dead fish have been received from alongshore Bay, Gulf, and Franklin counties.

Recent ensemble imagery (MODIS Aqua, 9/30), is completely obscured by clouds along- and offshore northwest Florida from Escambia to Okaloosa counties and from Gulf to Taylor counties, preventing analysis for those areas. In MODIS Aqua imagery from 9/30 (shown left) and 9/25 (not shown), a feature of elevated to very high chlorophyll (2 to >20μg/L) with the optical characteristics of *K. brevis* is visible alongshore, and up to 12 miles offshore, Bay County where recent reports of respiratory irritation and fish kills have been received. Additional sampling of this region is recommended.

Observed winds over the past five days may have promoted westward transport of *K. brevis* concentrations. North to northwest winds forecast today through Monday may

promote intensification of *K. brevis* concentrations at the coast of northwest Florida from Bay through Franklin counties.

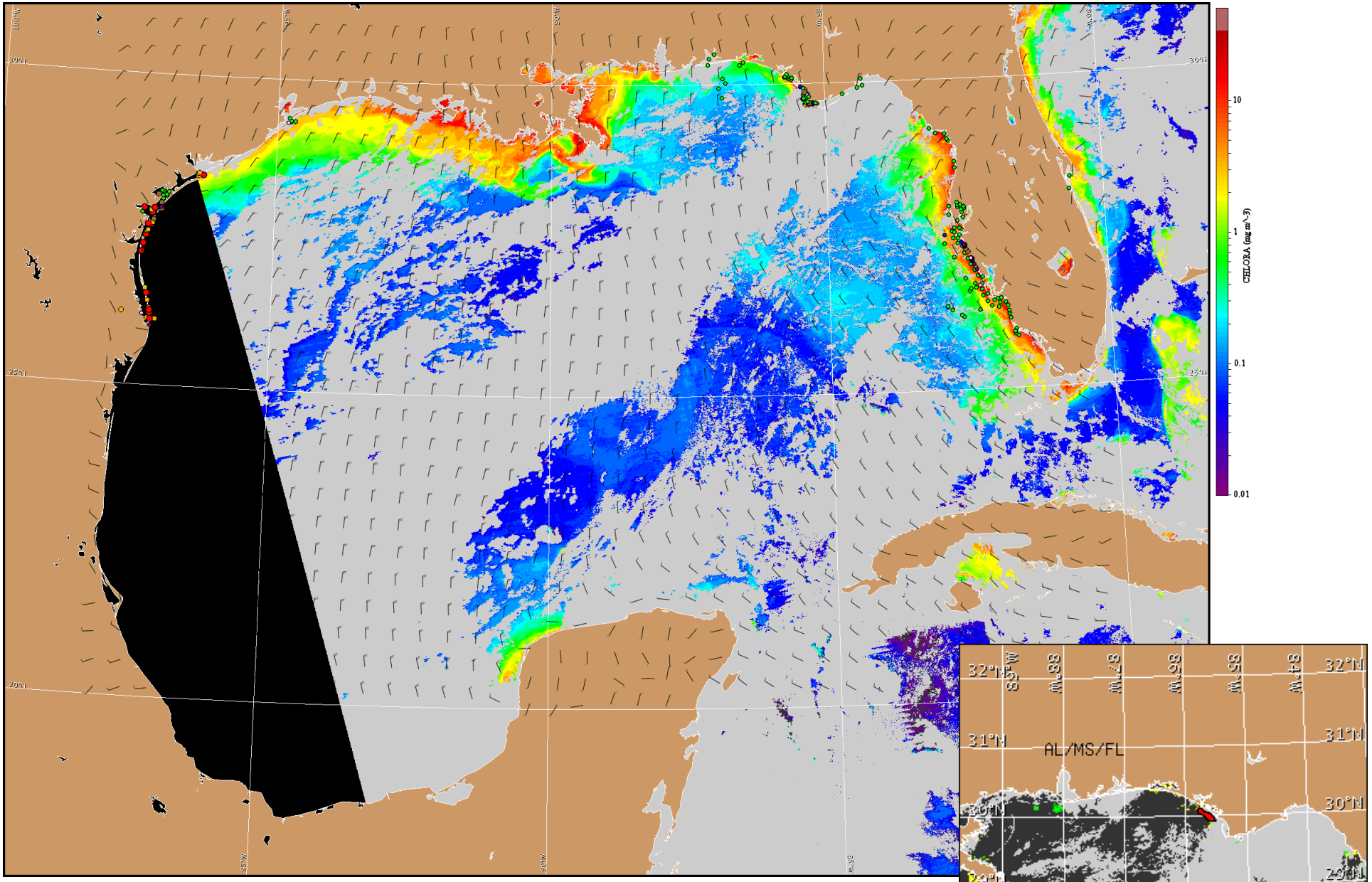
Davis, Yang, Kavanaugh



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

Wind Analysis

Escambia to Taylor counties: North to northwest winds (10-20kn, 5-10m/s) today through Monday.



Satellite chlorophyll image and forecast winds for October 2, 2015 06Z with points representing cell concentration sampling data from September 21 to 30: red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of sample providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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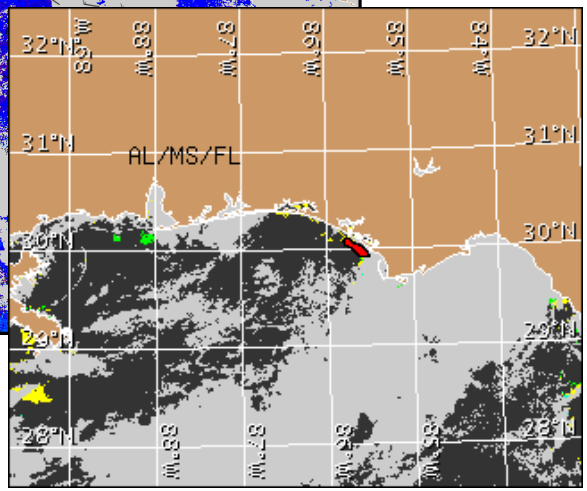

Verified and suspected HAB areas shown in red. Other areas with *K. brevis* optical characteristics shown in yellow (see p. 1 analysis for interpretation).